

Table 6 – Bag Headspace Readings		
Sample	Location	Headspace Reading (ppm)
TP-1	0-2 ft	39
TP-2	0-2 ft	43
TP-2	2-4 ft	142
TP-2	4-6 ft	138
TP-3	0-2 ft	125
TP-3	2-4 ft	158
TP-3	4-6 ft	125
TP-4	0-2 ft	133
TP-4	2-4 ft	>1,000
TP-4	4-6 ft	>1,000
TP-4	6-8 ft	210
TP-4	8-9 ft	174
TP-5	0-2 ft	23
TP-5	2-4 ft	56
TP-5	4-6 ft	40
TP-5	6-8 ft	28
TP-5	8-10 ft	31
TP-6	0-2 ft	39
TP-6	2-4 ft	53
TP-6	4-6 ft	61
TP-6	6-8 ft	56
TP-7	0-2 ft	50
TP-7	2-4 ft	57
TP-7	4-6 ft	60
TP-8	0-2 ft	19
TP-8	2-4 ft	44
TP-8	4-6 ft	64
TP-8	6-8 ft	58
TP-9	0-2 ft	24
TP-9	2-4 ft	60
TP-9	4-6 ft	46
TP-9	6-8 ft	46
TP-10	0-2 ft	7
TP-10	2-4 ft	25
TP-10	4-6 ft	49
TP-10	6-8 ft	41
TP-10	8-10 ft	40
HS-1	Garage floor drain sediment	12
HS-2	Under crawl-space AST	16
HS-3	Surface soil at SS-1	39
HS-4	Surface soil at SS-2	29
HS-5	Surface soil at SS-5	17

Jacques Whitford submitted soil samples from TP-2 (2-4 feet), TP-3 (2-4 feet), and TP-4 (2-4 feet), each exhibiting the highest PID readings, for VOC and GRO testing. In addition, PCB analysis was conducted on two surface soil samples (SS-1 and SS-2) and the floor drain sediment sample (SS-3), and RCRA metals analysis was conducted on two surface soil samples (SS-4 and SS-5). Results of chemical analyses are summarized in Table 7 below; the table includes only compounds identified and their associated sampling locations.

Table 7 – Summary of Soil Sampling Results								
Analyte	Units	Table 4 Residential Criteria	Baseline - 1	Baseline - 2	TP-3, 2-4	TP-4, 2-4	SS-4	SS-5
Acetone	ug/kg	475,000	NL	NL	197	<23,400	NA	NA
n-Butylbenzene	ug/kg	NL	NL	NL	<7.1	2,570	NA	NA
Ethylbenzene	ug/kg	1,670,000	NL	NL	<7.1	5,440	NA	NA
4-Isopropyltoluene	ug/kg	NL	NL	NL	<7.1	2,100	NA	NA
Naphthalene	ug/kg	245,000	NL	NL	<7.1	16,700	NA	NA
n-Propylbenzene	ug/kg	NL	NL	NL	<7.1	3,340	NA	NA
Toluene	ug/kg	2,390,000	NL	NL	<7.1	4,320	NA	NA
1,2,4-Trimethylbenzene	ug/kg	NL	NL	NL	<7.1	50,900	NA	NA
1,3,5-Trimethylbenzene	ug/kg	NL	NL	NL	<7.1	24,400	NA	NA
m,p-Xylene	ug/kg	10,000,000	NL	NL	<14.2	26,400	NA	NA
o-Xylene	ug/kg	10,000,000	NL	NL	<7.1	2,990	NA	NA
Gasoline Range Organics	mg/kg	NL	Saturated Soil	500-1000	NA	837	NA	NA
Arsenic	mg/kg	10	NL	NL	NA	NA	12.8	15.6
Barium	mg/kg	10,000	NL	NL	NA	NA	47.4	24.1
Chromium	mg/kg	NL	NL	NL	NA	NA	15.4	17.6
Lead	mg/kg	375	NL	NL	NA	NA	34.5	49.5
Notes: Regulatory Limits from Table 4-Remedial Action Guidelines for Contaminated Soils Residential Guideline in the MDEP Implementation of Remedial Action Guidelines Guidance Document. Baseline – 1 and 2 refer to cleanup categories in the MDEP's Hydrocarbon Spill Decision Tree NA denotes not analyzed NL denotes no limit								

Analytical results identified elevated gasoline constituents in TP-4, 2-4 feet; however, the concentrations were below MDEP residential soil criteria.

PCBs were not detected at concentrations above the laboratory reporting limit in SS-1, SS-2, and SS-3 (the detection limit was 30 µg/kg).

Of the RCRA metals tested at two surficial soil sampling locations, only arsenic exceeded the MDEP's residential soil criteria.

## 5.0 DISCUSSION

As shown on Table 7, only the concentration of arsenic in two surface soil samples exceeded the Table 4 residential criteria (SS-4 and SS-5). This arsenic may be naturally occurring.

Jacques Whitford used the "MDEP Chapter 691 Rules for Underground Oil Storage Facilities Decision Tree to Establish Cleanup Standards for Petroleum-Contaminated Sites" for the Subject Site. Based on a review of site location and use, we assigned the "Baseline 2" category for the subject site (clean-up of soil to 500-1000 ppm based on PID readings).

The area within 2,000 feet downgradient and 1,000 feet upgradient is served by a public water supply. Three private water supplies are located between 450 and 600 feet upgradient from the site. Potential impact to these wells is not likely. The gasoline-impacted soils at the site appear to be located above the water table and are underlain by relatively low-permeability glaciomarine deposits. This supposition is supported by PID readings that decrease substantially with depth in TP-4 (from readings of >1000 ppm at 4-6 ft. to 174 ppm at 8-9 ft.).

The PID results from TP-4, 2-4 and 4-6 exceeded the MDEP's Baseline-2 guideline. Additional soil testing will be necessary to better delineate the extent of soils that may contain residual gasoline above the Baseline-2 guideline.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information gathered and on observations made during this investigation, the Phase I and II ESAs have revealed evidence of recognized environmental conditions associated with the Subject Site. Jacques Whitford concludes the following:

1. Gasoline contaminated soil was encountered at the site in 1993 during removal of a gasoline UST; the removal was monitored by Acadia Environmental Technology. MDEP was notified of the findings and no further action was required. The recent investigation by Jacques Whitford identified gasoline-impacted soils down slope from the former tank. The concentration of residual gasoline in the soils exceeded the MDEP Baseline-2 standard.
2. A floor drain was observed in the garage building. According to a former owner, the drain discharges directly to the subsurface below the garage. The drain was located near an open container of petroleum and floor staining. No high PID readings or PCBs were detected in sediment in the floor drain. Nevertheless, petroleum products could have been discharged over time and released to the subsurface beneath the building. As a solid surface existed at the bottom of the drain and due to the surrounding concrete floor, collecting a subsurface soil sample in the vicinity of the drain was not performed during this phase of work.
3. While oil staining was apparent on the ground surface around stored parts and machinery on site, field observations during test pitting, PID screening and lab testing of soils suggests that the staining is relatively localized.

4. Of the 8 RCRA metals tested at two surficial soil sampling locations, only arsenic exceeded the MDEP's residential soil criteria. This arsenic may be naturally occurring.
5. Jacques Whitford observed suspect ACM and lead-based paint in building materials and in insulation between the walls of the 10,000-gallon aboveground storage tank (AST) at the site.

Based on the evidence of recognized environmental conditions associated with the Subject Site, Jacques Whitford recommends the following:

1. Completion of an asbestos survey if proposed or future renovation or demolition activities will impact suspect ACMs at the Subject Site.
2. Completion of concrete coring and hand augering adjoining the garage floor drain. Collection of soil samples for PID screening and analytical testing for appropriate parameters.
3. Submission of this report and any follow-up testing to the MDEP Voluntary Response Action Program (VRAP) as a first step in obtaining a "No Action Assurance Letter."
4. With MDEP concurrence, removal of petroleum contaminated soil with PID readings that exceed the MDEP Baseline-2 standard. Soil removal should be preceded by investigation of the extent of impacted soils in the vicinity of the former UST (e.g., geoprobes or additional test pits).
5. Preparation and submission of a clean-up report to MDEP to establish "closure" status for the site and associated impacted soils identified, as well as to support the VRAP process.

## 7.0 CLOSURE

This report is prepared for the sole benefit of Ms. Renee Lewis. This report may not be relied upon by any other person or entity without the expressed written consent of Jacques Whitford Company, Inc. and Ms. Renee Lewis.

Any uses, which a third party makes of this report, or any reliance on decisions made based on it, are the responsibility of such third parties. Jacques Whitford accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, Jacques Whitford in certain instances has been required to assume that the information provided is accurate.

The conclusions presented represent the best judgement of the assessor based on current environmental standards and on the site conditions observed from April 30 to May 12, 2004. Due to the nature of investigation and the limited data available, the assessor cannot warrant against undiscovered environmental liabilities. Should additional information become available, Jacques Whitford requests that this information be brought to our attention so that we may reassess the conclusions presented herein. This report was prepared by Mr. David Chapman, C.G. and Mr. Aaron Martin and was reviewed by Mr. D. Todd Coffin, C.G.

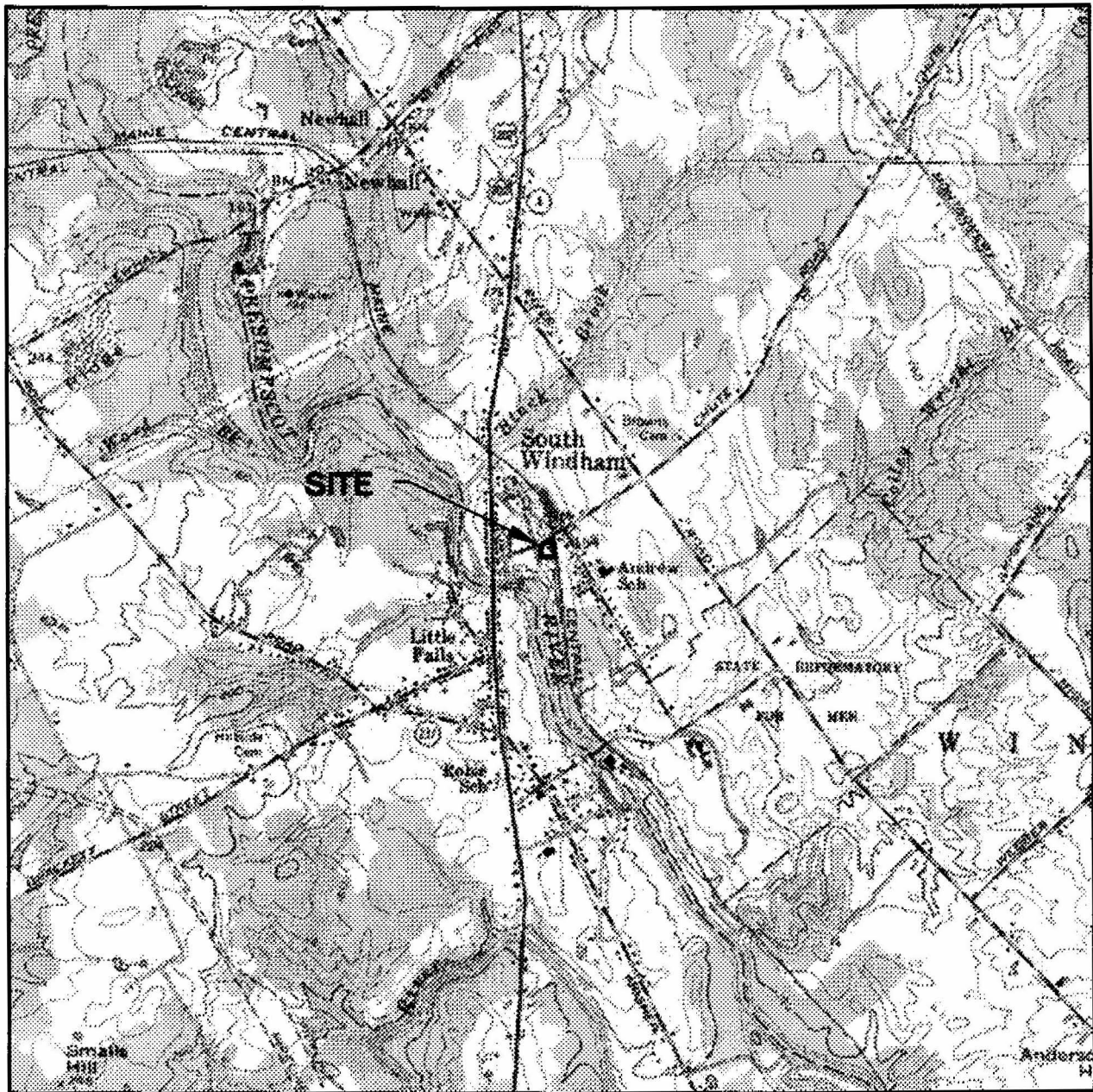
JACQUES WHITFORD COMPANY, INC.

David Chapman, C.G.  
*Geologist*

D. Todd Coffin, C.G.  
*Senior Hydrogeologist*

## **APPENDIX 1**

### **FIGURES**



MAP SOURCE:

TOPOZONE.COM  
PORTLAND, ME  
1956



2000 0 2000

Scale in feet



**Jacques Whitford Company, Inc.**

JACQUES WHITFORD LOCATION:  
PORTLAND, MAINE

DATE PREPARED: 6-02-04	DESIGNED BY: DVC	DRAWN BY: TS	CHECKED BY: DVC	REVIEWED BY: BP
REVISION DATE:	REVISION NO.:	DRAWN BY:	CHECKED BY:	REVIEWED BY:

PROJECT NAME/FILE NAME:  
DEPOT ENERGY/SITE

PROJECT NUMBER/PHASE:  
MEP04127/2

SCALE:  
1:24000

DRAWING TITLE:

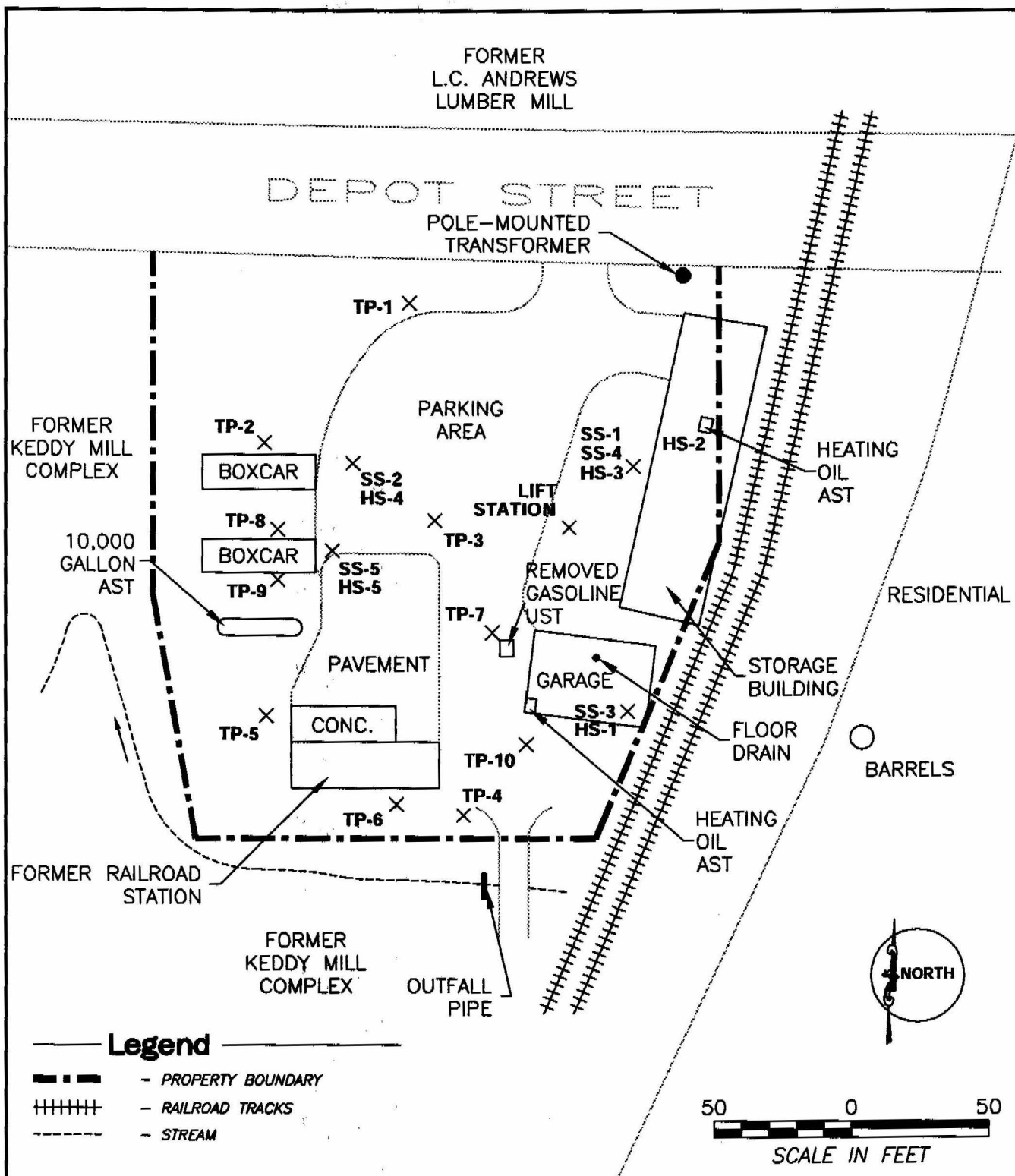
**SITE LOCATION MAP**  
FORMER DEPOT ENERGY SITE  
13 DEPOT STREET  
WINDHAM, MAINE

PREPARED FOR:  
RENEE LEWIS

FIGURE NO.

1

VIL\_RESP00975



**Jacques Whitford Company, Inc.**



JACQUES WHITFORD LOCATION:  
PORTLAND, MAINE

DATE PREPARED: 6-02-04	DESIGNED BY: DVC	DRAWN BY: TS	CHECKED BY: DVC	REVIEWED BY: BP
REVISION DATE:	REVISION NO:	DRAWN BY:	CHECKED BY:	REVIEWED BY:

PROJECT NAME/FILE NAME:  
DEPOT ENERGY/SITE

PROJECT NUMBER/PHASE:  
MEP04127/2

SCALE:  
1"=50'

DRAWING TITLE:

**SITE PLAN**  
FORMER DEPOT ENERGY SITE  
13 DEPOT STREET  
WINDHAM, MAINE

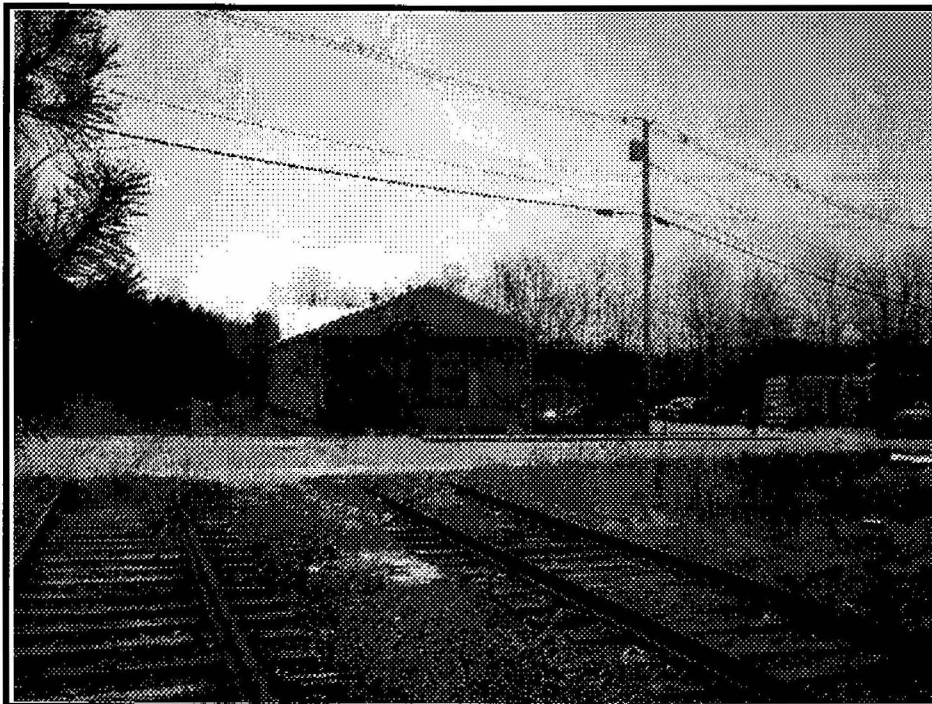
PREPARED FOR:  
RENEE LEWIS

FIGURE NO.

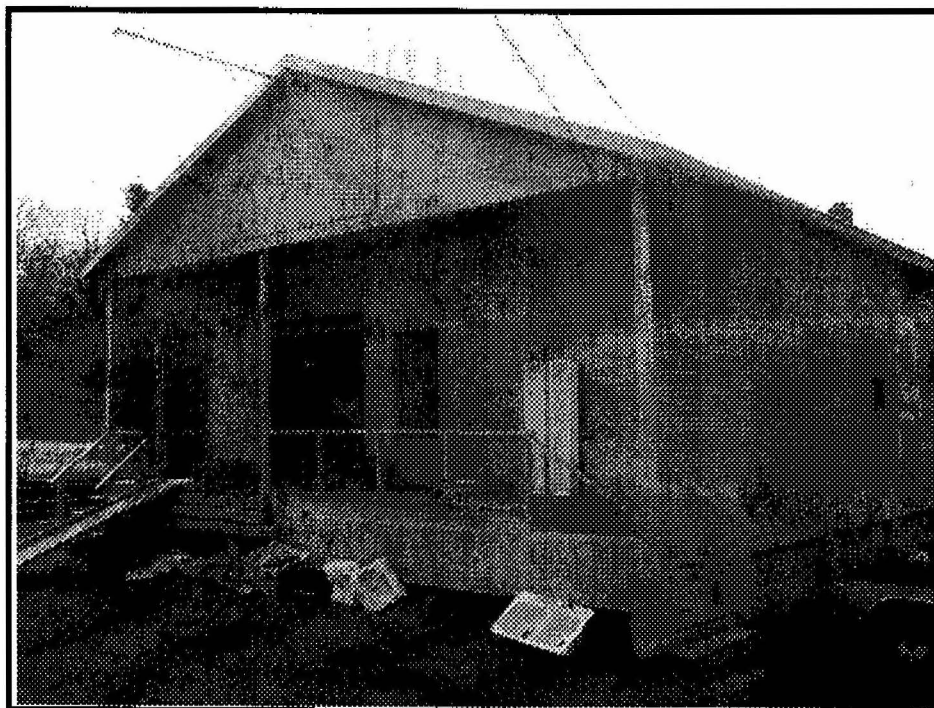
2

VIL\_RESP00976

**APPENDIX 2**  
**PHOTOGRAPHS**



**1. Subject Site from across Depot Street.**



**2. Warehouse building.**



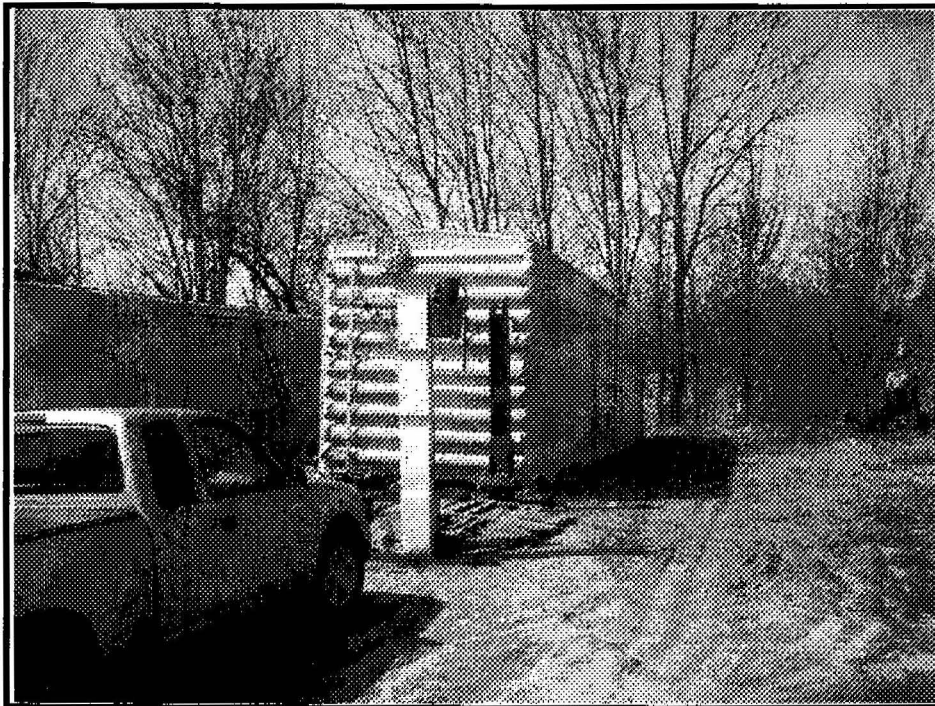


**3. Garage building.**

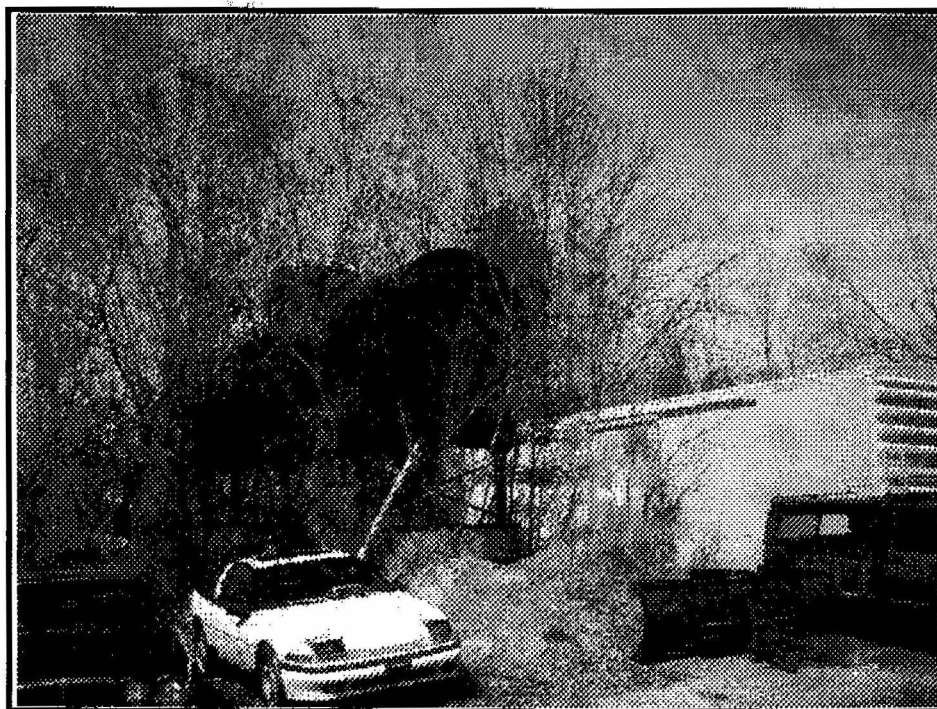


**4. Storage building/former railroad station with junked autos to the left and right.**

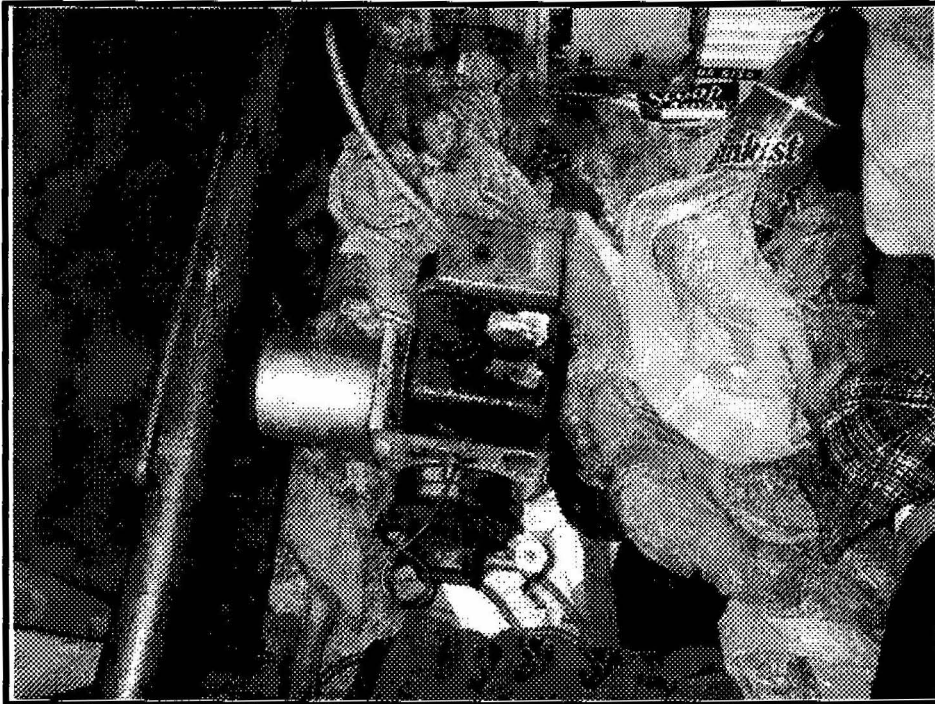




5. Boxcar used for storage of used transmissions.



6. 10,000 gallon aboveground storage tank (former rail car).



7. Oil burner in warehouse building.



8. Heating oil AST in garage.



**9. Transmissions in storage building (former train station).**



**10. Used transmissions stored in warehouse building.**